

Claims

- [c1] 1. An excavator tooth system comprising:
a mounting nose having a projecting spigot; and,
a wear member having at one end thereof a socket, said socket being defined by spaced side walls and upper and lower walls converging from a rearwardly facing socket opening to a forward end of said socket, each of said upper and lower walls comprising a forward bearing face and a rear bearing face separated by a forwardly convergent intermediate face, said front and rear bearing faces being substantially parallel to a longitudinal axis of said wear member, and in use, said front and rear bearing faces being engageable with complementary bearing faces on said spigot.
- [c2] 2. A system as claimed in claim 1 wherein said forward end of said socket forms an end bearing face.
- [c3] 3. A system as claimed in claim 2 wherein said end bearing face extends transversely of said longitudinal axis.
- [c4] 4. A system as claimed in claim 1 wherein the wear member comprises an adaptor having a front end adapted for releasable attachment thereto of a digging

point.

- [c5] 5. A system as claimed in claim 1 wherein said wear member includes an aperture in at least one wall of said socket.
- [c6] 6. A system as claimed in claim 1 wherein said wear member includes aligned apertures on opposite walls of said socket.
- [c7] 7. A system as claimed in claim 6 wherein said aligned apertures extend through opposite side walls of said socket.
- [c8] 8. A system as claimed in claim 1 wherein at least portion of said rear bearing face is of a width greater than said forward bearing face.
- [c9] 9. A system as claimed in claim 1 wherein at least portion of said rear bearing face is of a substantially a similar width to said forward bearing face.
- [c10] 10. A system as claimed in claim 1 wherein said rear bearing face is of an area greater than said forward bearing face.
- [c11] 11. A system as claimed in claim 1 wherein said socket opening has a transverse width greater than the width of the forward end of said socket.

- [c12] 12. A system as claimed in claim 1 wherein the side walls of said socket taper convergently towards said forward end of said socket.
- [c13] 13. An excavation device having an excavator tooth system according to claim 1.
- [c14] 14. An excavation device as claimed in claim 13 wherein said mounting nose is attached thereto.
- [c15] 15. An excavation device as claimed in claim 13 wherein said mounting nose is integrally formed therewith.
- [c16] 16. A lip for an excavation device having a plurality of spaced excavator tooth systems according to claim 1.
- [c17] 17. A lip as claimed in claim 16 wherein said mounting noses are attached to said lip.
- [c18] 18. A lip as claimed in claim 16 wherein said mounting noses are integrally formed with said lip.
- [c19] 19. A lip as claimed in claim 16 wherein wear plates are releasably secured between adjacent said spaced mounting noses.
- [c20] 20. A lock for releasably attaching said wear member to said mounting nose of the excavator tooth system of claim 1, said lock comprising:

at least one retaining member having a head portion and a screw-threaded shaft; and
an elongate body member having a non-circular cross section, said body member being adapted for removable insertion in a lock aperture of complementary cross section in the mounting nose, said body member including at least one screw-threaded aperture to receivably locate said at least one retaining member, said body member, in use, being captively retained in said lock aperture by a partial misalignment between said lock aperture and a retaining aperture in the wear member when said wear member is located on said mounting nose, said at least one retaining member, in use, being releasably securable in said body member via said retaining aperture whereby said head portion is located within said retaining aperture to prevent disengagement between said mounting nose and said wear member.

[c21] 21. A lock as claimed in claim 20 wherein said head portion includes a tapered shoulder extending between said head portion and said shaft, said tapered shoulder in use being frictionally engageable with a corresponding tapered recess in said body member.

[c22] 22. A lock as claimed in claim 20 wherein said at least one screw-threaded aperture is displaced from a central longitudinal axis of said body member.

- [c23] 23. A lock as claimed in claim 20 having a corrosion resistant coating thereon.
- [c24] 24. A lock as claimed in claim 20 wherein said body member is formed from a corrosion resistant material.
- [c25] 25. A lock as claimed in claim 20 wherein said body member is formed from a rigid engineering plastics material.
- [c26] 26. A lock as claimed in claim 20 wherein retaining members are coupled with said body member at opposite ends thereof to secure the wear member on the mounting nose via respective retaining apertures in said wear member.
- [c27] 27. A method of securing said wear member to said mounting nose of the excavator tooth system of claim 1, said method including the steps of:
inserting a body member of a lock into a lock aperture in said mounting nose, said body member having a non-circular cross sectional shape for location in a lock aperture of complementary cross sectional shape in the mounting nose;
captively retaining said body member in said lock aperture by locating said wear member on the mounting nose whereby at least one retaining aperture in said wear

member is partially misaligned with said lock aperture in the mounting nose; and
inserting, via said at least one retaining aperture, a screw-threaded shaft of a retaining member into a screw-threaded socket in said body member whereby a head portion of said retaining member is located in said retaining aperture to prevent disengagement between said mounting nose and said wear member.

[c28] 28. A lock as claimed in claim 27 wherein retaining members are coupled with said body member at opposite ends thereof to secure the wear member on the mounting nose.